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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,348	07/24/2000	Do-hyoung Kim	Q60039	4464

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Sughrue Mion Zinn MacPeak & Seas PLLC
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Washington, DC 20037-3202

EXAMINER

HYUN, SOON D

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,348

Applicant(s)

KIM, DO-HYOUNG

Examiner

Soon D. Hyun

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/09/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8 and 9 is/are rejected.
- 7) ☒ Claim(s) 3 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received


SOON HYUN
PATENT EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shima et al (U.S. Patent No. 6,456,714).

Regarding claim 1, Shima et al discloses a method for managing resources required for communication between a source device (one of devices 110-150 in FIG. 2) and a sink device (a peripheral device 230 in FIG. 2) in a network system (FIG.2) in which a digital interface (not shown, but it is inherent, because the devices are based on IEEE 1394 serial interface standard, see col. 3, line 66-col. 4, line 3) is used for connection between the source device and the sink device, the method comprising the steps of:

allocating to the source device (one of devices 110-150) system resources (minimum amount of bandwidth) presently required for commencement of communication between the source device and the sink device (the peripheral device

230, wherein the locating is performed by the sink device (step 710 in FIG. 7, see col. 6, lines 27-30);

monitoring at the source device a format of the output bit stream of the source device (the step of monitoring bit stream at the source device is not explicitly disclosed, but the step of monitoring is inherently required, because the source device sends (the step of informing in claim 4) a request for additional bandwidth to the peripheral device when the digital interface of the source device monitors data (bit stream) form and the digital interface of the source device determines additional bandwidth for the data after the monitoring step, see step 745 in FIG. 7 and col. 6, lines) while communications are being maintained between the source device and the sink device to determine if requirements for the system resources have changed;

allocating at the source device additional system resources to the source device if it is determined as a result of monitoring that the requirements for the system resources have changed (step 755, col. 6, lines 61-64); and

releasing system resources allocated communication between the source device and sink device, when communication between the source device and the sink device is terminated (steps 510-540 in FIG. 5, col. 5, lines 41-53).

However, Shima et al does not explicitly discloses the step of detecting at the sink device final system resources allocated for individual communication between the source device and the sink device, but Shima et al discloses that a microcontroller 320 in the peripheral device (the sink device) maintains a real time accounting of the amount

of bandwidth currently used on a serial bus 160 in FIG. 2 (col. 4, lines 48-50) (i.e., total bandwidth on the bus).

Those of skill in the art would have been motivated to maintain information at the microcontroller of the peripheral device for bandwidth for each device (110-150) to supervise and manage each device individually. Therefore, it would have been obvious to one having ordinary skill in the art to maintain and detect at the microcontroller of the peripheral device a real time accounting of the amount of bandwidth (final system resources) currently used by each communication device.

Regarding claims 2 and 6, Shima et al does not explicitly teach that the source device has a storage to record the request for additional bandwidth.

It would have been obvious to one having ordinary skill in the art to maintain information in the source device for the real time accounting of the amount of bandwidth currently used on the source device to know the status of data transmission from the device, thus the same information for the bandwidth allocated to each source device is maintained in the source device and the sink device as discussed for claim 1.

Therefore, it would have been obvious to one having ordinary skill in the art to detect the final system resources at the sink device based on the information recorded in the storage of the source device.

Regarding claim 5, Shima et al does not explicitly teach that the microcontroller has information whether each device (110-150) is active or inactive in communication.

Those of skill in the art would have been motivated to maintain information at the microcontroller of the peripheral device regarding status of active or inactive for each

Art Unit: 2663

device (110-150) to supervise and manage each device individually. Therefore, it would have been obvious to one having ordinary skill in the art to determine if communication between the source and the sink device has been terminated.

Regarding claim 8, Shima et al discloses a method for managing resources required for communication between a source device (one of devices 110-150 in FIG. 2) and a sink device (a peripheral device 230 in FIG. 2) in a network system (FIG.2) in which a digital interface (not shown, but it is inherent, because the devices are based on IEEE 1394 serial interface standard, see col. 3, line 66-col. 4, line 3) is used for connection between the source device and the sink device, the method comprising the steps of:

allocating to the source device (one of devices 110-150) system resources (more than 64 Kbps) required for commencement of communication between the source device and the sink device (the peripheral device 230), i.e., the devices are communicating with more than 64Kbps performing the step 755 in FIG. 7, and releasing at the source device redundant system resources (the additional bandwidth exceeding the minimum bandwidth, step 850 in FIG. 8 and col. 7, lines 20-22); and

releasing system resources allocated communication between the source device and sink device, when communication between the source device and the sink device is terminated (steps 510-540 in FIG. 5, col. 5, lines 41-53).

However, Shima et al does not explicitly discloses the step of detecting at the sink device final system resources allocated for individual communication between the source device and the sink device, but Shima et al discloses that a microcontroller 320

Art Unit: 2663

in the peripheral device (the sink device) maintains a real time accounting of the amount of bandwidth currently used on a serial bus160 in FIG. 2 (col. 4, lines 48-50) (i.e., total bandwidth on the bus).

Those of skill in the art would have been motivated to maintain a database at the microcontroller of the peripheral device for bandwidth for each device (110-150) to supervise and manage each device individually. Therefore, it would have been obvious to one having ordinary skill in the art to maintain and detect at the microcontroller of the peripheral device a real time accounting of the amount of bandwidth (final system resources) currently used by each communication device.

Regarding claim 9, refer to the discussion for claim 5.

Regarding claim 10, refer to the discussion for claims 1 and 8.

Allowable Subject Matter

4. Claims 3 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record fails to teach the step of updating a payload field of the output plug control register based on a bandwidth in combination with other elements as recited in claims 3 and 7.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon D. Hyun whose telephone number is 571-272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


S. Hyun
08/09/2005